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NEWS RELEASE

新聞稿

BH Global's Integration Engineering arm, BOS Offshore & Marine Pte Ltd ('BOS'), signs strategic System Integration Agreement with Danfoss in expediting adoption rate of Marine Hybrid/Full Electric vessel operation in Singapore waters

BH Global 的集成工程部門 BOS Offshore & Marine Pte Ltd ('BOS') 與 Danfoss 簽署戰略系統整合協定，以加快新加坡水域海洋混合/全電動船舶作業的採用率。

Singapore, 9 September 2020 - BH Global Corporation Limited ("BH Global", "明輝環球企業" or the "Group"), is pleased to announce that BOS Offshore & Marine Pte Ltd ("BOS"), a 90%-owned subsidiary of the Group, has entered into a System Integration Agreement with Danfoss. The strategic integration partnership between BOS and Danfoss will enhance both companies' sustainability and environmental roadmaps in expediting adoption rate of Marine Hybrid/Full Electric vessel operation in Singapore waters.

新加坡, 2020 年 9 月 9 日 - **BH Global Corporation Limited ("BH Global", "明輝環球企業"或簡稱"集團")** 僅此宣佈, 本集團 90% 控股子公司 BOS Offshore & Marine Pte Ltd (簡稱"BOS"), 已與 Danfoss 簽訂系統整合協定。BOS 和 Danfoss 之間的戰略整合夥伴關係將提高兩家公司的可持續性和環保路線圖, 加快新加坡水域海洋混合/全電動船舶採用率。

- BOS aspires to be a leader in Singapore maritime industry's drive towards achieving global standards on carbon emission reductions.
- BOS 渴望成為新加坡海運行業朝向實現全球減碳排放標準努力的領頭羊。
- In April 2018, the International Maritime Organisation ("IMO") laid out its strategy to reduce the shipping industry's total greenhouse gas ("GHG") emissions in 2050 by at least 50% from 2008 levels, and to reduce CO2 emissions per transport work by at least 40% by 2030.
- 2018 年 4 月, 國際海事組織(簡稱"IMO")制定出 2050 年航運業溫室氣體排放總量比 2008 年減少至少 50%, 且在 2030 年前將運輸工作的二氧化碳排放量至少減少 40% 的策略。

The strategic alliance between BOS and Danfoss started since 2019 when both companies started working together to power Singapore's first plug-in hybrid-electric fast launch vessel in a project where the vessel is being built and owned by major boat builder Penguin International Ltd. Signing of this agreement reaffirms both companies' vision in maritime electrification.

BOS 和 Danfoss 之間的戰略聯盟始於 2019 年，當時兩家公司開始合作為新加坡首艘插電式混合動力快艇提供動力的專案。該快艇由主要船舶建造商 Penguin International Ltd 建造和擁有。這協定的簽署重申了兩家公司對海上電氣化的願景。

The design, development, construction and delivery of green marine hybrid/full electric vessel includes critical project scopes of system integration, testing and certification of the vessel's hybrid-electric systems and technology. BOS develops our proprietary designed HMI (Human Machine Interface) and control system, which will seamlessly integrate and control the power drivetrain, batteries, and propulsion system in various operating modes.

環保海洋混合動力/全電動船舶的設計、開發、建造和交付包括船舶混合動力系統和技術的系統整合、測試和認證等關鍵專案範圍。BOS 開發我們獨家設計的 HMI (人機介面) 和控制系統，可在各種操作模式下無縫整合和控制動力傳動系統、電池和推進系統。

Danfoss Editron's hybrid-electric drivetrain system comprises of high efficiency synchronous reluctance permanent magnetic motors, inverters and inductors. Such semiconductor grade power electronic devices, when seamlessly integrated with other marine vessel's power management system, hybrid gearbox, battery or ESS (Energy Storage System) as well as BOS's HMI and control system, are the cornerstone to delivering a smart energy efficient micro grid and an intelligent energy management system to maritime users.

Danfoss Editron's 的混合動力電動傳動系統由高效同步磁阻永磁電動馬達、變頻器和電感組成。此類半導體級電力電子設備與其他船舶的電源管理系統、混合動力齒輪箱、電池或 ESS(儲能系統)以及 BOS 的 HMI 和控制系統無縫整合，成為提供船舶使用者智慧節能微電網和智慧能源管理系統的基石。

Mr. Vincent Lim, Chief Executive Officer of BH Global highlighted that [“The System Integration Engineering solutions by BOS will support Singapore's push for greater adoption of hybrid-electric propulsion systems in its maritime industry. It is in-line with BH Global's transformation roadmap in building a sustainable future through Environmental, Electrification and Digitalisation initiatives.”](#)

BH Global 首席執行官 Vincent Lim 先生強調, "BOS 的系統集成工程解決方案將支援新加坡推動其海運業大力採用混合動力推進系統。它符合 BH Global 透過環境、電氣化和數位化計劃構建一個永續未來的轉型路線圖。

Commenting on the signing of agreement, **Mr. Bryan Koh, Managing Director of BOS** emphasized [“In our course to deliver both environmentally sustainable and decarbonizing solutions in the marine and offshore sector, we have been relentlessly searching for marine certified high energy efficiency electrification equipment for years. The maritime industry is undergoing a major transformation due to the increase in global digitalization and decarbonization efforts. Today, BOS's Hybrid/Full Electric System Integration of the DANFOSS high efficiency power drivetrain products, offers a supreme decentralized DC power management system to future green marine vessel operations in Singapore water. This strategic partnership will strengthen both companies' collaborations to seize growth opportunities in maritime electrification.”](#)

BOS 董事總經理 Bryan Koh 先生在談到簽署協議時評論說: 多年來, 我們一直堅持不懈地尋找通過海洋認證的高能效電氣化設備, 以為海洋和近海領域提供環境上可持續減碳的解決方案。由於全球數位化和減碳努力的增加, 海事產業正在經歷一場重大變革。如今, BOS 的 DANFOSS 高效動力傳動系統產品的混合動力/全電動系統整合為新加坡水域未來的環保船舶運營提供了最

高分散式的直流電源管理系統。這種戰略夥伴關係將加強兩家公司的合作，抓住海上電氣化的成長商機。

Mr. Manuel Ong, General Manager of Danfoss Singapore Pte Ltd commented “We believe in building our business solutions based on sustainability. Our modular and compact product designs are a critical asset in small marine vessel operation where space and weight are very limited. Our technology also guarantees the highest efficiency. These factors, along with our strong industry track-record and global presence, is the reason for BOS to engage us on this strategic system integration relationship. Together with BOS’s experience in Project Management and System Integration capabilities, both companies are working towards contributing to maritime decarbonization efforts”

Danfoss Singapore Pte Ltd 總經理 Manuel Ong 先生表示：「我們相信要在永續發展的基礎上構建我們的業務解決方案。我們的模組化和精簡型產品設計是空間和重量非常有限的小型船舶運營商的重要資產。我們的技術也保證了最高的效率。這些因素，以及我們豐富的行業經驗和全球網絡，是 BOS 與我們締結戰略系統整合關係的原因。結合 BOS 在專案管理和系統整合能力方面的經驗，兩家公司都致力於為海上減碳工作做出貢獻。

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About BH Global Corporation Limited (Bloomberg Code: BHGM.SP)

關於明輝環球企業有限公司 (Bloomberg 編號 BHGM.SP)

BH Global Corporation Ltd is an established group providing comprehensive solutions in Electrical and Technical Supply, Integration Engineering, Green LED Lighting, Cyber Security and Infrared Thermal Sensing Technology to a multitude of industries across the globe. With more than half a century of experience and presence in the marine and offshore, oil and gas, industrial, petrochemical and commercial sectors, the Group has built strong synergies and expertise that strategically position it to develop turnkey solutions focused on electrification, digitisation and environmental sustainability. Through excellent research and development and project management capabilities, BH Global has a unique platform which is proficient in producing integrated solutions to capture growth opportunities, executing swift and impactful value-added services to its clients worldwide.

明輝環球企業有限公司為一家為全球眾多行業提供電氣和技術供應、集成工程、環保 LED 照明、網路安全和紅外線熱感應技術等綜合解決方案的知名集團。憑藉半個多世紀的經驗和在海洋和近海、石油和天然氣、工業、石化和商業領域佔有一席之地，集團已建立了強大的綜效和專業，在戰略上則定位為專注於發展電氣化、數位化和環境可持續性統包工程的解決方案。通過卓越的研發和專案管理能力，BH Global 擁有獨特的平台，擅長開發整合解決方案來捕捉成長機會，為全球客戶提供快速且有影響力的增值服務。

For more information, please refer to the website, www.bhglobal.com.sg

如需更多資訊，歡迎瀏覽公司網站：www.bhglobal.com.sg

About BOS Marine & Offshore (BOS)

關於 BOS Marine & Offshore (BOS)

BOS is a Project Management Engineering company with expertise and services in Project and Procurement Management for marine and offshore projects, Design and Engineering which covers all aspects of EIT (Electrical, Instrumentation, Telecommunication) design and FEED (Front End

Engineering Design), and Mobile Electrification Engineering to provide electric propulsions for small vessels.

BOS 是一家專案管理工程公司, 提供船舶和海上專案的專案和採購管理、設計和工程所需的專業知識和服務, 範圍涵蓋全方位的 EIT (電氣、儀錶、電信) 設計和 FEED (前端工程設計) 以及行動電氣化工程, 為小型船舶提供電力推進。

BOS is also the exclusive marine distributor of renowned Future Pipe Industries (FPI)'s GRE (Glass Reinforced Epoxy) pipes in Singapore, Japan and Vietnam. BOS pays meticulous attention to details in engineering design, assists clients to develop customized solutions from initial evaluation to project planning and execution, to installation and commissioning, including on-going maintenance. This ensures seamless integration in order to minimize expenditure and maximize operational efficiency.

BOS 也是著名的 FPI GRE (強化玻璃環氧樹脂管) 在新加坡、日本和越南的獨家分銷商。BOS 無微不至的關注每個工程設計的細節, 協助客戶開發量身訂製的解決方案, 從初始評估到專案的規劃和執行, 再到安裝和調試階段, 包括後續維護。這樣可確保無縫整合, 將費用降到最低並將運營效率最大化。

For more information, please refer to the website, www.bos-sg.com
如需更多資訊, 歡迎瀏覽公司網站: www.bos-sg.com

About Danfoss

關於 Danfoss

Danfoss engineers advanced technologies that enable us to build a better, smarter and more efficient tomorrow. In the world's growing cities, we ensure the supply of fresh food and optimal comfort in our homes and offices, while meeting the need for energy-efficient infrastructure, connected systems and integrated renewable energy. Our solutions are used in such areas as refrigeration, air conditioning, heating, motor control and mobile machinery. Our innovative engineering dates back to 1933 and today, Danfoss holds market-leading positions, employing 28,000 people and serving customers in more than 100 countries. We are privately held by the founding family.

Danfoss 工程師採用先進技術, 使我們能夠打造更好、更智慧、更高效的明天。在世界上越來越多的城市中, 我們確保新鮮食品的供應和家庭與辦公室的最佳舒適度, 同時滿足對節能基礎設施、互聯網系統和整合可再生能源的需求。我們的解決方案用於冷氣、空調、加熱、馬達控制和行動機械等領域。我們的創新工程可追溯至 1933 年, 如今, Danfoss 擁有市場領先地位, 員工人數達 28,000 名, 並於 100 多個國家/地區為客戶提供服務。公司由創始家族私人持有。

For more information, please refer to the website, www.danfoss.com

如需更多資訊, 歡迎瀏覽公司網站 www.danfoss.com

About Danfoss Editron Oy

關於 Danfoss Editron Oy

Danfoss Editron Oy specializes in hybrid and electric powertrain systems for off-highway and marine markets. A business division of Danfoss, it develops and manufactures high-performance power systems for heavy-duty vehicles, machines and marine vessels, based on its unique synchronous reluctance assisted permanent magnet technology. Danfoss Editron Oy powertrains deliver market-leading efficiency and are suitable for hybrid and electric applications within the power range of 30kW to 2,000kW.

Danfoss Editron Oy 專注於混合動力和電力動力系統，用於非公路和海運市場。作為 Danfoss 的營業單位，它以其獨特的同步磁阻輔助永磁技術為重型車輛、機器和船舶開發和製造高性能動力系統。Danfoss Editron Oy 的送電效率領先市場，適用 30kW 至 2,000kW 功率範圍的混合動力和電動應用。

Danfoss EDITRON is the complete electric drivetrain system developed by the company. It is controlled by powerful software that optimizes each individual component of the electric or hybrid drivetrain, leading to far more intelligent management of power distribution in order to deliver maximum efficiencies for the end user.

Danfoss EDITRON 是該公司開發的完整電動傳動系統。它由強大的軟體控制，可優化電動或混合動力傳動系統的每個單獨元件，從而更智慧地管理配電，為最終用戶提供效率極大化。

With operations in Lappeenranta, Finland and Colorado, United States of America, Danfoss Editron has assembled an award-winning team to work on the technologies that will enable the world of tomorrow to do more with less.

Danfoss Editron 在芬蘭 Lappeenranta 和美國 Colorado 都有業務，公司組建了一個屢獲殊榮的團隊，研究可以讓明日世界以更少的成本完成更多工作的技術。

For more information, please refer to the website, www.danfoss.com/editron

如需更多資訊，歡迎瀏覽公司網站：www.danfoss.com/editron

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